TYPES OF SOME AMERICAN TREES

M. L. FERNALD

With three plates

Quercus velutina Lam. Dict. 1: 721(1783) or *Q. tinctoria* Bartr. ex Michx. Hist. Chênes Am. no. 13, *tt. 24* and *25*(1801), at least as to *t. 25*, is, as Sargent said in his Man. Trees N. Am. 239(1905), "more variable in the form of its leaves than the other North American Black Oaks," though its cups, with their grayish-pubescent and thin, free-tipped and acuminate scales, quickly distinguish it, as do the large tomentose winter-buds and the deep yellow or orange inner bark, which gave it the once familiar name, QUERCITRON. In fact, the foliage, which is remarkably constant on individual adult trees or colonies but discouragingly different on trees of some other colonies, inspired the godfather of the Arnold Arboretum, the late George B. Emerson, to write in his Trees and Shrubs of Mass., ed 2, 1: 161 (1875), under *Q. tinctoria:* "There are three pretty distinct varieties of the black oak. . . . These trees seem to be as different as the several varieties or species of the chestnut oak group. There are, probably, corresponding differences in the qualities of the wood." Nevertheless, so far as I have noted, most recent descriptions of what is taken as typical or average *Q. velutina* (or *tinctoria*) have studiously avoided the original diagnoses of Lamarck and of Michaux. Furthermore, we find characteristic drawings of leaves which strongly depart from the original illustrations cited by Lamarck or shown by Michaux, for recent drawings (such as those of Emerson, Faxon in Sargent's Silva and Manual, Hough, Dippel, Britton & Brown, Britton's North American Trees, Gray's Manual, the popular books of Mathews and others) all show a pinnatifid leaf with deep sinuses and elongate sharply toothed lobes. The characteristic leaves of the types of *Q. velutina* and *Q. tinctoria*, if mentioned at all, are usually treated as something quite atypical. Probably they are unusual on adult fruiting trees and to a great extent they seem to be juvenile or reversionary foliage, found on seedlings or saplings too young to fruit, and very generally on late sprouts coming out in August or September on the branches of trees from which the usual adult and pinnatifid leaves were stripped by caterpillars earlier in the summer.

To begin at the beginning, Lamarck's *Quercus velutina* was briefly but clearly described:

11. CHÊNE velouté, *Quercus velutina. Quercus foliis obovatis angulatis subtus brevissimè lanatis, angulis setâ terminatis.* N. *An quercus humilis Virginiensis, castaneae folio.* Pluk. Alm. 309

[*i. e. Q. prinoides* Willd.].

β. Eadem foliis inciso-lobatis. N. ex Hort. D. Cels. Conf. *Quercus nigra.* du Roi. Harbk. p. 272. t. 6. f. I.

Ce *Chêne,* qui semble tenir le milieu par ses charactères entre l'espèce précédente [all-inclusive *Q. rubra* L.] & celle qui suit [*Q. nigra* L.], nous paroît ne devoir former qu'un arbrisseau. Il s'éloigne des *Chênes rouges* par ses feuilles ovales-obtuses, & veloutées ou comme drapées en dessous. Ces feuilles sont pétiolées & rétrécies en coin à leur base. Les pointes sétacées qui terminant leurs angles, ne permettent point de confondre ce *Chêne* avec l'espèce qui suit [i. e. *Q. nigra* L., including *Q. marilandica* Muench.].

Then, as an important item, Lamarck stated that he knew his *Quercus velutina* only imperfectly, having seen only a *very young* individual, said to have come from North America (Au reste, nous ne le connoissons qu'imperfaitement, ne l'ayant vu que fort jeune).

Lamarck's query as to whether his *Quercus velutina* might be what Plukenet had called "Quercus humilis Castaneae folio *Virginiensis* **The Chinquapin Oake**" at once suggests that the leaf of the type of *Q. velutina* could not have been the deeply pinnatifid one commonly illustrated under that name. Furthermore, his suggestion under *Q. velutina β,* "Conf. *Quercus nigra.* duRoi," not L., leads at once to DuRoi's figure (our PLATE I, *fig. 3*), which is certainly not deeply pinnatifid. Finally, the TYPE, preserved at Paris (our *figs. 1* and *2*), shows conclusively that Lamarck's species was indeed based on foliage of an "arbrisseau . . . fort jeune." This leaf is very closely matched by those of many specimens of saplings, such as shown on a "young tree in woods" from Fountain County, Indiana, *G. N. Jones* no. *15550.* Such a leaf is comparatively rare on fruiting branches but on sprouts coming out in August, on the branches of adult trees which have earlier been stripped, it is common. Incidentally, however, the leaf of the type of *Q. velutina* could almost as well have come from a sapling of Red Oak, *Q. rubra* L. (*Q. rubra maxima* Marsh. [1785]; *Q. ambigua* Michx. f. [1812], not Humb. & Bonpl. [1809]; *Q. borealis* Michx. f. [1817]; *Q. maxima* (Marsh.) Ashe [1916]). In fact, on reconsideration, Lamarck thought so himself, for after the publication by the younger Michaux of his *Q. ambigua* in 1812, Lamarck wrote on the original label of his *Q. velutina* "*Q. ambigua.* Mich."!

Leaving for a moment the question of *Q. rubra* L., we turn to *Q. tinctoria* Bartr. ex Michx. Hist. Chênes Am. no. 13 (1801), the name validated for the scarcely described *Q. tinctoria* of Bartram, Trav. 37 (1791), Bartram having simply "Gigantic Black Oak. Querc. tinctoria; the bark of this species of oak is found to afford a valuable yellow dye. The tree is known by the name of Black Oak in Pennsylvania, New-Jersey, New-York, and New-England." Whether a species is acceptably described merely by stating its colloquial name and its economic use without a single morphological character is very questionable. If that is all that is required the possibility of various upsets may well be considered. At any rate,

Michaux validated *Q. tinctoria* Bartram, and after Michaux's fuller description and illustration the name was almost universally used in the United States for the northern Black or Yellow-barked Oak or Quercitron, this general usage lasting for nearly a century—until the doubtful *Q. velutina* was picked up in 1892 by Sudworth and accepted by Sargent in his Silva in 1897.

Michaux's *Quercus tinctoria,* "foliis petiolatis, subtus pubescentibus, lato-obovalibus, leviter et subrotunde lobatis, basi obtusis," etc., consisted of two named varieties, each accompanied by a life-sized illustration of foliage and fruit, partly shown in our PLATE II, *figs. 1* and *4*. The foliage in both plates of Michaux is so similar that that of only one is here reproduced, but the cups were so distinct that they are reproduced as in the originals (*figs. 1* and *4*). The leaves, as will be seen, are not at all deeply lobed but are suggestive of the leaf of the type of the problematic *Q. velutina* Lam. The first of Michaux's two varieties, *Q. tinctoria angulosa,* the CHÊNE QUERCITRON *à feuilles anguleuses* (*fig. 1*), was assigned a synonymy including "*Q. Americana rubris venis,*" etc. of Plukenet, this being one of the basic synonyms, and possible source of the trivial name, cited by Linnaeus for his *Q. rubra* (1753); *Q. nigra* Marsh., not L., which had the leaves "irregularly and sometimes pretty deeply sinuated"; and *Q. velutina* Lam. In the first ("α") variety, *Q. tinctoria angulosa,* the cups were somewhat platter-like or saucer-shaped ("Cupula subscutellata . . . Cupule presque'en soucoupe") and their short scales appressed ("écailles peu adhérentes"), the cup and its scales (*fig. 1*) thus somewhat similar to those of *Q. ambigua* Michx. f. (1812), not Humb. & Bonpl., our *fig. 2,* or *Q. borealis* Michx. f. (1817), as well as of *Q. rubra* L., as shown by Sargent, Silva, 8: *t. cccx, figs. 1* and *3* (our *fig. 3*)!

Under his second ("β") variety, *Quercus tinctoria* (*sinuosa*), shown in our PLATE II, *fig. 4,* Michaux cited the figure of *Q. nigra* sensu DuRoi, not L., our PLATE I, *fig. 3,* which Lamarck had earlier noted under his *Q. velutina. Quercus tinctoria sinuosa,* with "FOLIIS profundius sinuosis," although the profundity, as shown in his plate, was not very profound, otherwise differed from the first variety in its "Cupula turbinata" (our PLATE II, *fig. 4*), with the thin, lanceolate scales less tightly appressed. Redouté's (or Michaux's) figure well matching Faxon's in Sargent, l. c., *t. ccccxv, fig. 1,* of the fruits of *Q. velutina* (our PLATE II, *fig. 5*). The second half of *Q. tinctoria* was, then, referable to *Q. velutina* as interpreted by recent authors, the first half to *Q. rubra* L.

If it be urged that *Quercus velutina,* as described by Lamarck and as shown by the single leaf preserved, is not clearly definable exclusively as one species, and if it be admitted that Michaux's first variety of his *Q. tinctoria* was *Q. rubra* L., which is not generally used in dyeing, it might become necessary to face *Q. discolor* Ait. Hort. Kew. 3: 358(1789). In fact, *Q. discolor* antedated by two years Bartram's doubtfully acceptable description and by 12 years the validation by Michaux of his *Q. tinctoria,*

under which supposedly preferable name it rested as a synonym throughout that long period when neglect of strict priority was not a sin. Sargent, Trelease, and others regularly cited *Q. discolor* as a synonym of *Q. velutina* (or *tinctoria*), but Aiton's description was so discouragingly brief and inconclusive that it could have applied to any one of several species; and when Aiton stated that it was *Q. rubra* β. of Linnaeus he projected grave doubt into the situation, for, according to Sargent, Silva, l. c. 125, *Q. rubra* β. is not separable from *Q. rubra* (α), the species which some authors delight to call *Q. borealis* Michx. f. N. Am. Sylv. 1: 98, *t.26*(1817), the younger Michaux not wholly clarifying his very clear plate by retaining for it the earlier designation *Q. ambigua*! I do not know just what Aiton's type of *Q. discolor* was; if he were indeed correct in identifying it with *Q. rubra* β. of Linnaeus (1753), then those who would throw out the name *Q. rubra* L. as a *nomen confusum* should prayerfully consider the priority by 28 years of *Q. discolor* Ait. over *Q. borealis* Michx. f. Personally I am not now doing so, because of inadequate knowledge of what Aiton had. Nor am I throwing out *Q. rubra* L., the significance of that name having been sufficiently established by a century of good usage. As showing that the situation is not an absolutely simple one it is worth noting that *Q. discolor* had been introduced into cultivation in England as early as 1763 (Ait. l. c.). Lamarck's final comment after his description of *Q. velutina* twenty years later (in 1783) therefore becomes illuminating, but with a somewhat blinding light: "On le dit originaire de l'Amérique septentrionale: nous l'avons entendu nommer *Quercus desgulor anglorum*." Professor Arthur Stanley Pease informs me that, whereas "*Quercus*" and "*anglorum*" are perfectly evident, "*desgulor*" is not Latin. "Could that by any chance be a mistake, due to someone's faulty hearing of *discolor?* Is there any oak which the English botanists had called *Q. discolor?*" In view of the fact that the Lamarck specimen was a sapling raised at Paris, it is not at all improbable that it was derived from the tree cultivated in England and later published as *Q. discolor* Ait. I do not know on what evidence *Q. discolor* was placed by Sargent and by Trelease in the synonymy of *Q. velutina*.

Coming down to Earth, we have the situation which recurs in case of very many of the earlier American species described in Europe, without any clear understanding of our plants. When Linnaeus, Aiton, or Lamarck based a species on a single cited specimen all was well; when they cited two, confusion was probable; when they based species on several citations and quite uncoördinated specimens, confusion became confounded. Nevertheless, if we should start in to reject all the Linnean names of this sort as *nomina confusa* the wreckage would be enormous. What real good would be accomplished, except the satisfaction of a mechanical theory? No theory (not even attempts to "standardize" colloquial usage) ever established a language or its use. The well known and common *Asplenium platyneuron* (L.)Oakes would be rejected, for the basic *Acrostichum*

platyneuron L. would have to go because Linnaeus included under his binomial not only an *Asplenium* but members of *Polypodium*. *Scirpus capillaris* L. (nomenclatural basis of *Fimbristylis capillaris* (L.)Gray, *Stenophyllus capillaris* (L.)Britton, and of *Bulbostylis capillaris* (L.)C. B. Clarke — *Bulbostylis* a conserved name), "*Habitat* in Virginia, Aethiopia, Zeylona," was a mixture of several species and at least two genera; yet the trivial name has been fixed by usage ("established custom") ever since it was restricted by Roemer & Schultes in 1817, and no good would result from now suddenly declaring it a *nomen confusum*. Surely *Quercus velutina*, as described by Lamarck and as shown by his preserved specimen, is pretty vague. *Quercus tinctoria* of Michaux consisted of two specific elements, the first not belonging to *Q. tinctoria* as interpreted for a century.

Or take a very simple case, that of *Fraxinus americana* L. Sp. Pl. 1057(1753):

3. FRAXINUS foliolis integerrimis, petiolis teretibus. *Gron. virg.* 122. *Roy. lugdb.* 533.

Fraxinus caroliniensis, foliis angustioribus utrinque acuminatis pendulis. *Catesb. car.* I.*p*.80.*t*.80.

Habitat in Carolina, Virginia.h

That is a relatively uncomplicated account but it has its entanglements. The Catesby plate (a portion shown in our PLATE III, *fig. 1*) of his *Fraxinus caroliniensis*, etc. of "low moist places" in Carolina, shows a characteristic fruiting branch with the small oblong leaflets acuminate at both ends, and the very distinct fruit of the southern Water- or Swamp-Ash, the characteristic small tree of southeastern swamps and very abundant in both Carolinas and eastern Virginia, "with," to quote Sargent's Silva, "elongated stout terete pale petioles"; whereas the White Ash, the *Fraxinus americana* of all recent authors, has, as Sargent correctly says, "stout grooved petioles," etc. Gronovius gave nothing not covered later by Linnaeus, and he, likewise, cited Catesby's description and plate. Royen simply abbreviated the Gronovian account but included the Catesby reference. In view of the "petiolis teretibus" of the Linnean diagnosis, the citation by him of a single plate, and his citation first of Carolina, a perfectly rational case could be made out for using the name *Fraxinus americana* L. (1753) for the southern Water-Ash which we all call *F. caroliniana* Mill. (1768). We should then be forced to call the common northern White Ash either *F. nova-anglia* Mill. (1768), *F. acuminata* Lam. (1786), or *F. caroliniensis* Wangenheim (1787), according to which of these, on careful comparison of the types, proved to have right of way; it would be ironical if Wangenheim's name won the competition!

My point is just this: the evidence of the Linnean account and the one plate which he cited lead directly to *Fraxinus americana* as the name for the southern Water-Ash; but one final point, often neglected by those who invoke the principle of *nomina confusa*, saves the day. Linnaeus had in his herbarium, when he prepared the *Species Plantarum* of 1753, a speci-

men which he marked as no. "3. *americana*" (our PLATE III, *fig. 2*). Only by taking as the TYPE this badly defoliolated specimen, showing dentate round-based leaflets (a characteristic leaf of a species with "grooved petioles") can we save the name *F. americana* in its familiar sense. Yet this is exactly what we have to do in a great number of cases, or else abandon some of the most familiar names or, most unfortunately, reverse their significance.

When the unquestioned type has been hopelessly misinterpreted and there is no way out we must make the change, but when a Linnean species was a confusion of several elements, as in *Quercus Prinus* and *Q. rubra,* the case approaches that of *Fraxinus americana,* just discussed. Sargent, Silva, 8: 53, using the name *Quercus Prinus* L. in its long-restricted sense of *Q. Prinus* (*monticola*) Michx. or *Q. montana* Willd., said in a footnote (footnotes have a way of being given the principal weight!): "The early description of the Chestnut Oak might apply as well to the Swamp Chestnut Oak (*Quercus Michauxii*) as to this species, which does not grow near the coast of Virginia, where, however, the Swamp Chestnut Oak is common." That was the entering wedge; forthwith the name *Q. Prinus* was transferred by the credulous to the latter. However, as Svenson pointedly says in Rhodora, 47: 365(1945), "To this may be replied that Banister, who collected much of the early material described by Plukenet, did not lose his life by falling off a mountain on the coastal plain," Banister living "on the coast" of Virginia, only about 10 miles from Clayton's home. Furthermore, the Rock Chestnut Oak (*Q. montana*) occurs in the right situations (dry rocky slopes) not only near Clayton's home but in a number of counties to the south and southwest, where, if there are any disbelievers, I shall be glad (if they pay the bills) to show it within sight of transatlantic freighters steaming up the lower James! Since, as Svenson shows, Linnaeus himself marked specimens of this oak as *Q. Prinus,* what but confusion results in a change in the application of the name, especially when the new interpretation is based upon wholly erroneous and theoretical assumption?

Similarly with *Quercus rubra* L. That name covered many (if not most) of the eastern species of subgenus *Erythrobalanus* as now understood, but the northern Red Oak was just as much among them as any of the others. In 1916, however, Sargent in Rhodora, 18: 46, suddenly reversed the long-established usage by stating his opinion that "the name *Quercus rubra* Linnaeus must be transferred to the tree which later was called *Quercus falcata* by Michaux, the Red Oak of the southern states." If typification is to rest primarily on colloquial names it is important to check the facts.

In his original publication of *Quercus falcata* Michx. Hist. Chênes Am. no. 16(1801), the elder Michaux called it "DOWNY RED OAK." Michaux filius, who knew vastly more than any predecessor (or most successors) from first-hand experience with eastern North American trees, called it in his Hist. Arb. Forest. Am. Sept. 2: 104(1812) only "SPANISH OAK," and he then explained, as he did again, in English, in his No. Am. Sylva, 1: 87

(1817), under "SPANISH OAK," that "In Delaware, Maryland and Virginia, it is known only by the name of Spanish Oak, and in the Carolinas and Georgia by that or Red Oak." Now checking on the names used in the period following Michaux but before the colloquial names were factory-made, we get interesting results. Stephen Elliott, Sketch Bot. S. C. and Ga. 2: 605(1824), under the very strikingly different *Q. falcata* var. *triloba* (Michx.)Nutt., said of colloquial usage in South Carolina and Georgia: "These two trees are called by the inhabitants Red Oak or Spanish Oak. Where I have seen any distinction made, Red Oak was applied to the Q. Triloba — Spanish Oak to the Q. falcata." Croom, Cat. Pl. New Bern, N. C. 30(1837) has *Q. falcata* simply as "*Black oak,*" thus entering a new competitor! Darby, Man. Bot. So. States, 316(1841), gave for *Q. falcata* only "Spanish Oak." M. A. Curtis, Geol. Nat. Hist. Surv. N. C. pt. III.35 (1860), enumerating the oaks of the state, had "Spanish Oak (Q. falcata.)" and "Red Oak (Q. rubra.)," but on p. 39, under "SPANISH OAK. (Q. falcata, Michx.)" he said: "This is generally known in this state, I think, by the name of *Red Oak,* though sometimes called as above. It is also, in some parts, denominated *Turkey Oak,* from a vague resemblance between the form of the leaf (when it has but three divisions) and the track of a Turkey." Porcher, writing of the practical uses of plants among the people of South Carolina, in his Resources of So. Fields and Forests, 256(1863), called *Q. falcata* "Spanish Oak," Porcher stating that "In domestic practice, where an easily obtained and efficient astringent is required, this, and the more common species, the *Q. rubra* [in the long-established sense], are of no little value. They are used to a large extent on the plantations in South Carolina." If anyone knew about such uses in South Carolina, certainly Porcher did. His statement gives support to the much earlier one of Brickell in 1737, Nat. Hist. N. C. [repr. without date, by the Trustees of Public Libraries of N. C.], 60, Brickell saying: "The *Spanish Oak* has a whitish smooth Bark [Sargent, Silva, 8: 147, says "sometimes pale"] . . .; the Bark of this Tree is used for the Cure of the *Yaws.*" Not quite so early was John Clayton's "Quercus rubra seu Hispanica hic dicta, foliis amplis varie profundeque incisis," in Gronovius, Fl. Virg. ed. 2. 149(1762), for when, in 1839, Asa Gray examined these Clayton plants, he wrote against this no. (785) in his copy of Gronovius "*Q. falcata.*" It is not necessary to draw in Clayton's further comment, "Cortex ad corium depsendum utilissimus" and to argue that he referred to the "Cure of the *Yaws.*" "Could be!" The early use of the name "Spanish Oak" for typical *Quercus falcata* must be apparent, although from Virginia southward the name Red Oak was also sometimes used.

Sudworth, in his Nomencl. Arb. Fl. U. S. 171(1896), enumerating the states where the colloquial names are used, but using the name *Q. digitata* for *Q. falcata, Q. triloba* and *falcata,* var. *pagodaefolia* Ell., gave "Spanish Oak" preference, this name for *Q. falcata* (*digitata*) being used in 12 states, including "South Carolina, North Carolina, Virginia, Delaware and

Pennsylvania"; while "Red Oak" had been found in use for this species in 8 states, the northeasternmost being North Carolina and Virginia. Later, however, in his Check List For. Trees U. S. (1927), Sudworth, following Sargent's lead, wrote of the "tree we have been calling Spanish Oak" which "must, therefore, be called *Quercus rubra* Linnaeus. Notwithstanding the fact that this oak has long been known . . . as Spanish Oak. . . It seems advisable, therefore, to discard the name 'Spanish Oak' and to take up Southern Red Oak," just as if this edict from Washington would change the actual usage of such unschooled woodsmen as have always called it "Spanish Oak," "Turkey-Oak" or even "Black Oak." In this volume, however, Sudworth gives a reenumeration of states in which the various colloquial names are used: "Spanish Oak" in 12, including "Del., Md., Va., N. C., S. C.," etc.; "Red Oak" in 10, the northeasternmost being "N. C., Va."; "Southern Red Oak" in none. Therefore, by his strange method of counting the ballots, the "NAME IN USE" is "Southern Red Oak." *Standardized Plant Names* has no monopoly in deciding what names are in actual use among "the people."

My point in all this is as follows: since the sum-total of evidence from those who early wrote of southern trees from first-hand knowledge of them is that the name "Spanish Oak" was, before modern dictatorial days, more generally used for *Q. falcata* than the name "Red Oak" (used more generally in the South for the traditional *Quercus rubra*), the argument that by *Q. rubra* of "Virginia, Carolina" Linnaeus really meant *Q. falcata* seems to me a forced one. Sudworth, in 1897, had enumerated 27 states (all in which it occurs) where "Red Oak" was used for *Q. rubra* of practically all botanists down to Sargent in 1916. Since the name of this species suddenly and quite unjustifiably has been changed to *Q. borealis* its "NAME IN USE" suddenly changes to "Canadian Red Oak" or "Northern Red Oak." *C'est à rire!*

Nothing but confusion arises from shifting the name *Quercus rubra* to the very different southern *Q. falcata,* which has honorably borne that name for nearly a century-and-a-half, especially since *Q. rubra* in its traditional sense was among the specimens so marked by Linnaeus. If the argument is pressed that *Q. rubra* L. was a *"nomen confusum,"* we shall have to face the same argument regarding hundreds of other names which had a tangled beginning. It seems to me that in these cases, as in those of *Quercus velutina* and *Fraxinus americana,* the cause of real understanding and progress is best served by following the *spirit* more definitely than some imagined *"letter"* of the International Rules; and in holding such names as were based demonstrably in part on the plant long accepted as typical. Naturally, there are left many names which have from the first been misapplied. In these cases change is unavoidable. When, however, long-established and universally understood names can legitimately be preserved, why seek reasons to change them? One of the Guiding Principles of our International Rules (Art. 5) reads: " . . . where the con-

sequences of rules are doubtful, established custom must be followed." The earlier wording was better: "established custom becomes law."

EXPLANATION OF PLATES

PLATE I

FIGS. 1 and 2. The TYPE and labels of *Quercus velutina* Lam. (after *Cintract*), FIG. 2 showing Lamarck's reference to DuRoi's illustration of *Q. nigra* sensu DuRoi, not L., with which Lamarck thought *Q. velutina* might be identical, and his later identification of *Q. velutina* with *Q. ambigua* Michx. f. FIG. 3. DuRoi's illustration of his *Q. nigra*.

PLATE II

FIG. 1. Portion of the original illustration of *Quercus tinctoria angulosa* Michx. FIG. 2. Fruit of *Q. borealis* Michx. f., 1817 (*Q. ambigua* Michx. f., 1812, not Humb. & Bonpl. [1809]), from the original plate. FIG. 3. Fruit of *Q. rubra* L., after *Faxon* in Sargent's Silva. FIG. 4. Fruit of *Q. tinctoria* (*sinuosa*) Michx. from the original plate. FIG. 5. Fruits of *Q. velutina*, after *Faxon* in Sargent's Silva.

PLATE III

FIG. 1. *Fraxinus caroliniensis, foliis angustioribus utrinque acuminatis pendulis* of Catesby, the illustration cited by Linnaeus as his *Fraxinus americana*. FIG. 2. The specimen (courtesy of Mr. *S. Savage*) marked by Linnaeus "3 americana" in his own herbarium prior to 1753, this specimen accepted as the TYPE of the species.

GRAY HERBARIUM,
HARVARD UNIVERSITY.